

Claims

1. A water-craft propulsion device for a water-craft, including:
a drive portion configured to be activated to propel the water-craft in use; and
an actuation means configured to enable activation of the drive portion in
5 accordance with a predetermined timing sequence.
2. A water-craft propulsion device as claimed in claim 1 wherein the
actuation means includes timing means for controlling the time period for which the drive
portion is activated, the timing means being arranged to override the activation of the
drive means in accordance with the predetermined timing sequence.
- 10 3. A water-craft propulsion device as claimed in any one of the preceding
claims wherein the predetermined timing sequence includes one or more of the
following:
at least one activation window in which the actuation means is operable to
activate the drive portion;
15 at least one deactivation window in which the actuation means is prevented from
activating the drive portion.
4. A water-craft propulsion device as claimed in any one of the preceding
claims wherein the timing of the predetermined timing sequence is measured from a time
at which the drive portion is activated.
- 20 5. A water-craft propulsion device as claimed in any one claims 1 to 3
wherein the timing of the predetermined timing sequence is measured from a time at
which the drive portion is deactivated.
6. A water-craft propulsion device as claimed in any one of the preceding
claims wherein the predetermined timing sequence includes one or more of the
25 following:
an activation window of a fixed duration;
a deactivation window of a fixed duration.

7. A water-craft propulsion device as claimed in any one of the preceding claims wherein the predetermined timing sequence includes an activation window followed by a deactivation window.

5 8. A water-craft propulsion device as claimed in any one of the preceding claims wherein predetermined timing sequence includes a 10 second activation window followed by a 20 second deactivation window.

9. A water-craft propulsion device as claimed in any one of claims 3 to 8 wherein during an activation window the actuation means is configured to allow a user to selectively activate and/or deactivate the drive portion.

10 10. A water-craft propulsion device as claimed in any one of the preceding claims wherein the actuation means preferably includes an actuation switch operable by a user to selectively activate and deactivate the drive portion and a timing module configured to restrict or allow activation of the drive portion in accordance with the timing sequence.

15 11. A water-craft propulsion device as claimed in any one of the preceding claims wherein the drive portion includes:

a propulsion means;

a motor configured to drive the propulsion means; and

a power supply.

20 12. A water-craft propulsion device as claimed in any one of the preceding claims wherein the drive portion is substantially enclosed in a housing.

13. A water-craft propulsion device as claimed in claim 12 wherein the housing is shaped to minimise drag.

25 14. A water-craft propulsion device as claimed in either of claims 12 or 13 which further includes a protective cowling substantially enclosing the propulsion means.

15. A water-craft propulsion device as claimed in any one of claims 12 to 14 wherein the housing includes one or more buoyancy chambers.

16. A water-craft propulsion device as claimed in any one of the preceding claims wherein the propulsion means has approximately neutral buoyancy.

17. A water-craft including a propulsion device as claimed in any one of the preceding claims.

5 18. A water-craft as claimed in claim 17 wherein the propulsion device is integrated with the water-craft.

19. A water-craft as claimed in claim 17 consisting of the combination of a non-powered water-craft and a propulsion device configured to be mounted thereto.

10 20. The water craft as claimed in claim 19 wherein the propulsion device is removably mounted to the non-powered water-craft.

21. A kit configured to enable a non-powered water-craft to be converted to a powered water-craft; the kit including, a water-craft propulsion device as claimed in any one of claims 1 to 16; and attachment means configured to enable fitment of the propulsion device to a non-powered water-craft.

15 22. A kit as claimed in claim 21 wherein the attachment means includes one or more straps configured to be fastened around a portion of the water-craft.

23. A kit as claimed in either claim 21 or 22 wherein the attachment means includes an adhesive patch configured to be mounted between the a portion of the water-craft and a portion of a housing of a drive portion of the propulsion means.

20 24. A water-craft propulsion device for mounting to a water-craft of the type including an upper rider support surface and a lower water engaging surface which meet to form a pair of longitudinally extending rails which can be gripped by a rider to hold the water-craft when in use; said propulsion device including a drive portion configured to be activated to propel the water-craft; and an actuation means including at least one
25 actuation switch which is configured to enable activation of the drive portion, said water-craft propulsion device being configured to be mounted to the water-craft such that at least one actuation switch is mounted on, or adjacent to, a rail of the water-craft such that a rider can operate said activation switch whilst gripping the rail of the water-craft.

25. A water craft propulsion device as claimed in claim 24 wherein the water-craft propulsion device includes two actuation switches which must be activated simultaneously to cause activation of the drive portion of the water-craft propulsion device.

5 26. A water craft propulsion device as claimed in claim 24 or 25 which is further configured such when it is mounted to said water-craft each actuation switch is mounted on, or adjacent to, a rail of the water-craft to enable a rider to operate said activation switches whilst gripping the rail of the water-craft.

10 27. A water-craft propulsion device as claimed in claim 26 wherein each switch is positioned in use on, or adjacent to a different rail of the water craft.